

CLAIMS

What is claimed is:

- 1 1. A display system comprising:
 - 2 an electro-optic layer;
 - 3 a first electrode operatively coupled to said electro-optic layer;
 - 4 a first substrate having a plurality of pixel electrodes for receiving a plurality of
 - 5 pixel data values which represent an image to be displayed, wherein
 - 6 for each of said pixel electrodes, a first pixel electrode surface has a
 - 7 first distance relative to said first electrode and a second distance
 - 8 relative to a surface of said first substrate and a second pixel electrode
 - 9 surface has a third distance relative to said first electrode and a fourth
 - 10 distance relative to said surface of said first substrate, and wherein said
 - 11 first distance does not equal said third distance and said second
 - 12 distance does not equal said fourth distance and wherein said first pixel
 - 13 electrode surface and said second pixel electrode surface are
 - 14 substantially flat.
- 1 2. A display system as in claim 1 wherein said electro-optic layer comprises a
- 2 liquid crystal material which is disposed between said first electrode and said first
- 3 substrate and wherein said first electrode is a common counter electrode.

1 3. A display system as in claim 1 wherein said first substrate is generally planar
2 and has a first surface on which said plurality of pixel electrodes are disposed and said
3 surface is opposite said first electrode.

1 4. A display system as in claim 3 wherein said first surface is a back surface of
2 an integrated circuit (IC) and said first substrate comprises said IC.

1 5. A display system as in claim 4 wherein said display system comprises a liquid
2 crystal on silicon (LCOS) reflective display device.

1 6. A display system as in claim 2 wherein said first pixel electrode surface and
2 said second pixel electrode surface are illuminated with the same color light.

1 7. A display system as in claim 2 wherein a first surface area of said first pixel
2 electrode surface and a second surface area of said second pixel electrode surface are
3 substantially the same.

1 8. A display system as in claim 2 wherein said first pixel electrode surface and
2 said second pixel electrode surface are reflective surfaces.

1 9. A display system as in claim 8 wherein a dielectric layer is disposed above said
2 first pixel electrode surface and not said second pixel electrode surface.

- 1 10. A display system comprising:
 - 2 a substantially flat first electrode;
 - 3 an electro-optic layer operatively coupled to said first electrode;
 - 4 a plurality of pixel electrodes which are substantially flat;
 - 5 a plurality of reflectors each having a different distance relative to said first
 - 6 electrode.
- 1 11. A display system as in claim 10 wherein said electro-optic layer comprises a
2 liquid crystal material which is disposed between said first electrode and said plurality
3 of pixel electrodes and wherein said first electrode is a common counter electrode.
- 1 12. A display system as in claim 10 wherein said first electrode and said plurality
2 of pixel electrodes are substantially parallel.
- 1 13. A display system comprising:
 - 2 an electro-optic layer;
 - 3 a first electrode operatively coupled to said electro-optic layer, said first
 - 4 electrode having a substantially flat first surface;
 - 5 a first substrate having a plurality of pixel electrodes for receiving a plurality of
 - 6 pixel data values which represent an image to be displayed, wherein
 - 7 for each of said pixel electrodes, a first pixel electrode surface has a
 - 8 first distance relative to said first electrode and a second pixel electrode
 - 9 surface has a second distance relative to said first electrode, and

10 wherein said first distance does not equal said second distance and
11 wherein said first pixel electrode surface and said second pixel
12 electrode surface are substantially flat and substantially parallel to said
13 first surface.

1 14. A display system as in claim 13 wherein said first pixel electrode surface and
2 said second pixel electrode surface are illuminated with the same color light.

1 15. A display system as in claim 14 wherein said electro-optic layer comprises a
2 liquid crystal material which is disposed between said first electrode and said first
3 substrate and wherein said first electrode is a common counter electrode.

1 16. A display system as in claim 15 wherein a first surface area of said first pixel
2 electrode surface and a second surface area of said second pixel electrode surface are
3 substantially the same.

1 17. A display system as in claim 15 wherein said first pixel electrode surface and
2 said second pixel electrode surface are reflective surfaces.

1 18. A display system as in claim 15 wherein said display system is a micro
2 display.

1 19. A display system as in claim 15 wherein said display system comprises a
2 liquid crystal on silicon (LCOS) reflective display device.

1 20. A display system comprising:
2 a first electrode;
3 a first substrate having a plurality of pixel electrodes;
4 an electro-optic layer operatively coupled to said first electrode and to said
5 plurality of pixel electrodes, said electro-optic layer having a plurality
6 of thicknesses defined by different distances between said first
7 electrode and said first substrate, wherein a difference electro-optic
8 layer thicknesses between closely spaced cells is approximately an odd
9 multiple of a 1/4 wavelength of light which illuminates said plurality of
10 pixel electrodes.

1 21. A display system as in claim 20 wherein said electro-optic layer comprises a
2 liquid crystal material which is disposed between said first electrode and said first
3 substrate and wherein said first electrode is a common counter electrode.

1 22. A display system as in claim 21 wherein each of said plurality of pixel
2 electrodes comprises a reflector and said display system is a reflective micro display.

1 23. A display system as in claim 20 wherein for each of said pixel electrodes, a
2 first pixel electrode surface has a first distance relative to said first electrode and a

3 second pixel electrode surface has a second distance, not equal to said first distance,
4 relative to said first electrode.

1 24. A display system as in claim 23 wherein said first pixel electrode surface and
2 said second pixel electrode surface are illuminated with the same color light.

1 25. A display system comprising:
2 a first electrode;
3 a first substrate having a plurality of pixel electrodes;
4 an electro-optic layer operatively coupled to said first electrode and to said
5 plurality of pixel electrodes, said electro-optic layer having, for each of
6 said pixel electrodes, substantially the same thickness, which is
7 defined by a distance between said first electrode and a surface of each
8 of said pixel electrodes, and wherein a first optical path length for light
9 differs from a second optical path length for light for each of said pixel
10 electrodes.

1 26. A display system as in claim 25 wherein said electro-optic layer comprises a
2 liquid crystal material which is disposed between said first electrode and said first
3 substrate and wherein said first electrode is a common counter electrode.

1 27. A display system as in claim 26 wherein for each of said pixel electrodes a
2 dielectric layer is disposed above a first pixel electrode surface but not a second pixel
3 electrode surface.

1 28. A display system as in claim 26 wherein each of said pixel electrodes
2 comprises a reflector and said display system is a reflective microdisplay.

1 29. A display system as in claim 26 wherein said first optical path length and said
2 second optical path length comprise paths for light through said electro-optic layer.

1 30. A display system as in claim 29 wherein for a given image being displayed, a
2 same color light passes through said first optical path length and through said second
3 optical path length.

1 31. A display system as in claim 26 wherein for each of said pixel electrodes a
2 dielectric layer is disposed above a first pixel electrode surface, and a dielectric of
3 different thickness is disposed over a second pixel electrode surface.